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**Quincy Faxon Park Apartments Fire
Building and Fire Code Investigation**

State Fire Marshal Stephen D. Coan today released the findings of his agency's code compliance investigation in the July 9, 2011 fire at Faxon Park Apartments in Quincy, MA. Coan said, "I am extremely concerned when so many units of housing are lost in a single fire, especially when the building is sprinklered." The fire started when a charcoal grill being used on a balcony ignited the wooden balcony and traveled into the attic of the 24-unit building and spread quickly unimpeded.

Local Fire and Building Officials Must Review Similar Buildings

Coan said, "It is incumbent on local fire and building officials to take the lessons learned from this fire and prevent similar or worse fires in their own jurisdictions. This is not the first fire we've had in this type of large apartment building and if this fire had happened in the middle of the night, we might not have been so fortunate to have no casualties."

The Investigation

Since the fire building was completely destroyed, most of the investigation centered on examining the plans and sister buildings built in the complex. The two codes that impact buildings are the State Building Code, that sets requirements for how buildings are built including fire protection systems and the Fire Code, which generally governs fire prevention and the maintenance of fire protection systems. The investigation found that the building was not built to the approved plan in several areas and that the draft stopping was not built in accordance with the State Building Code, and the sprinkler systems were not installed according to the accepted standard.

Three Main Recommendations

The investigation has three main recommendations: clarification of whether the applicable building code is based on the date the permit is applied for or the date the permit is issued; finalize the adoption by both the Board of Building Regulations and Standards and the Board of Fire Prevention Regulations of the National Fire Protection Association (NFPA)

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Standard 25 on water based fire protection, and that local building and fire departments review similar buildings in their jurisdictions for similar violations of the state building code.

Quincy Officials Aggressively Ordered Corrections

As the investigation continued, the Quincy city officials wasted no time in taking steps to order corrective action on the remaining buildings prior to the completion of this investigation. The owners of the building have either completed the work or it is underway.

Building Had NFPA 13-R Sprinkler System

The building was constructed under the requirements of the 5th edition of the building code that did not require sprinklers in these types of large wood-frame apartment buildings.

Quincy's adoption of a local option law required the installation of a sprinkler system and an NFPA 13-R system was approved. This type of system is considered a partial sprinkler system by fire protection professionals because it is designed primarily for life safety not property protection. It is intended to allow people enough time to exit the building, but it is not designed to protect the structure itself. It does not require sprinklers in the attic or on the balconies. In this incident no one was injured. Inspection of the sister buildings found that the sprinkler system installed there was not in full compliance with the standard.

Quincy officials have ordered the owners to hire a registered fire protection engineer to ensure the fire sprinkler systems are properly installed and maintained in the buildings in the complex.

Clarification Needed During Transition of Building Code Editions

At the time the building application was made the state was transitioning from the 5th to the 6th edition, which was in effect at the time the building permit was issued. The first recommendation of the report is for the Board of Building Regulations and Standards (BBRS) to seek clarification of whether the applicable building code is based on the date the permit is applied for or the date the permit is issued. If the building had been built under the requirements of the 6th edition of the building code, it would have been required to have an NFPA 13-R sprinkler system as well as sprinklers on the exterior balconies.

After several large loss fires in similar buildings, State Fire Marshal Coan persuaded the Board of Building Regulations in the 7th edition of the State Building Code to require a full NFPA 13 sprinkler system in new buildings of this size. This requires sprinklers in the attics and on the balconies. Such a system is designed for both life safety (giving people adequate time to escape) and building protection.

Finalize Adoption of NFPA 25 Standard on Sprinkler Systems

Adoption of a national standard for the installation, maintenance and testing of water-based fire protection systems (NFPA 25) by both the Board of Fire Protection Regulations and the Board of Building Regulations and Standards are in process. This fire underscores the need to finalize that adoption and set uniform standards for building owners on how to properly maintain these systems.

Building Not Built to Plan: Draft stopping and Fire Barriers

The investigation discovered two issues where the building was not built according to the approved plans. These are significant issues that local fire and building officials in other communities should review in similar buildings. The draft stopping in the attic, designed to impede the spread of fire and smoke through the attic was not constructed according to the approved plan and is also a violation of the building code. It was not continuous and access panels were left open. This allowed the fire and smoke to travel across the attic unimpeded.

In addition, there was no solid fire-rated barrier under the vinyl soffits on the balconies, which almost certainly allowed the fire on the balcony to enter the void space in the building unimpeded. The building plans indicated that such a barrier would be installed. The Quincy officials have ordered correction of these issues in the remaining buildings.

One of the report's conclusions was that the inherent safety concerns to occupants is the large amount of combustibles used to construct such structures; the use of lightweight construction techniques that handle structural load well but may fail quickly in fire conditions; and the density of dwelling unit; the number of residents; and limited fire department access.

Coan said, "While we have taken steps to ensure these types of buildings are better protected from fire in the future, we need to make sure those already built are as safe as possible."